



Laboratory for
Analytic Sciences

Reflect. Observe. Imagine.

Cyber at LAS

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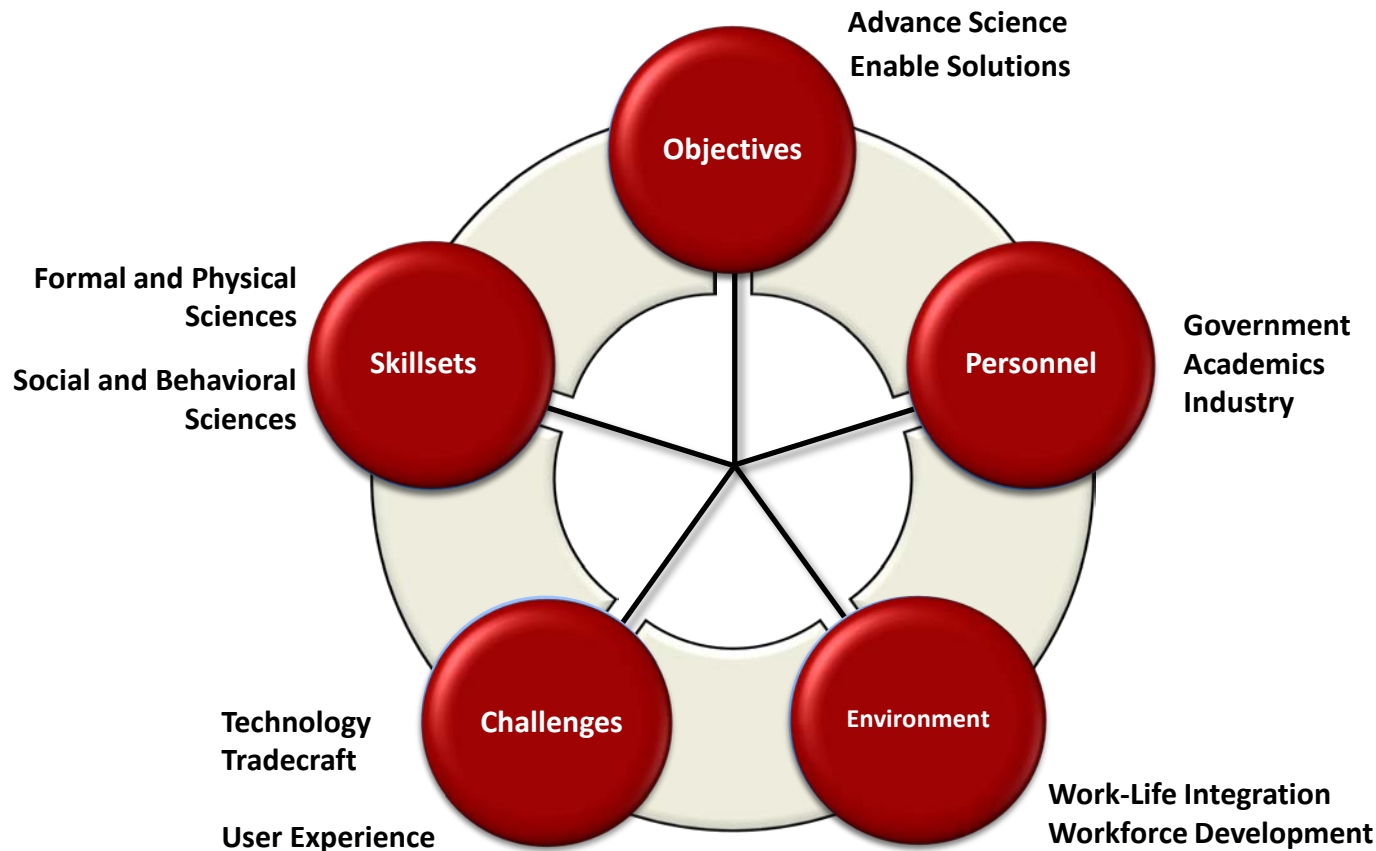
Laboratory for Analytic Sciences

The Laboratory for Analytic Sciences (LAS) is a government, academic and industry collaboration charged with imagining, investigating and implementing innovative solutions for a variety of tactical and strategic analytic challenges of critical importance to the U. S. Intelligence Community.

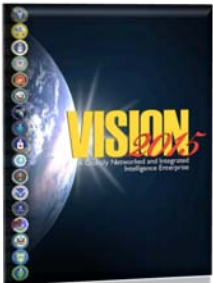
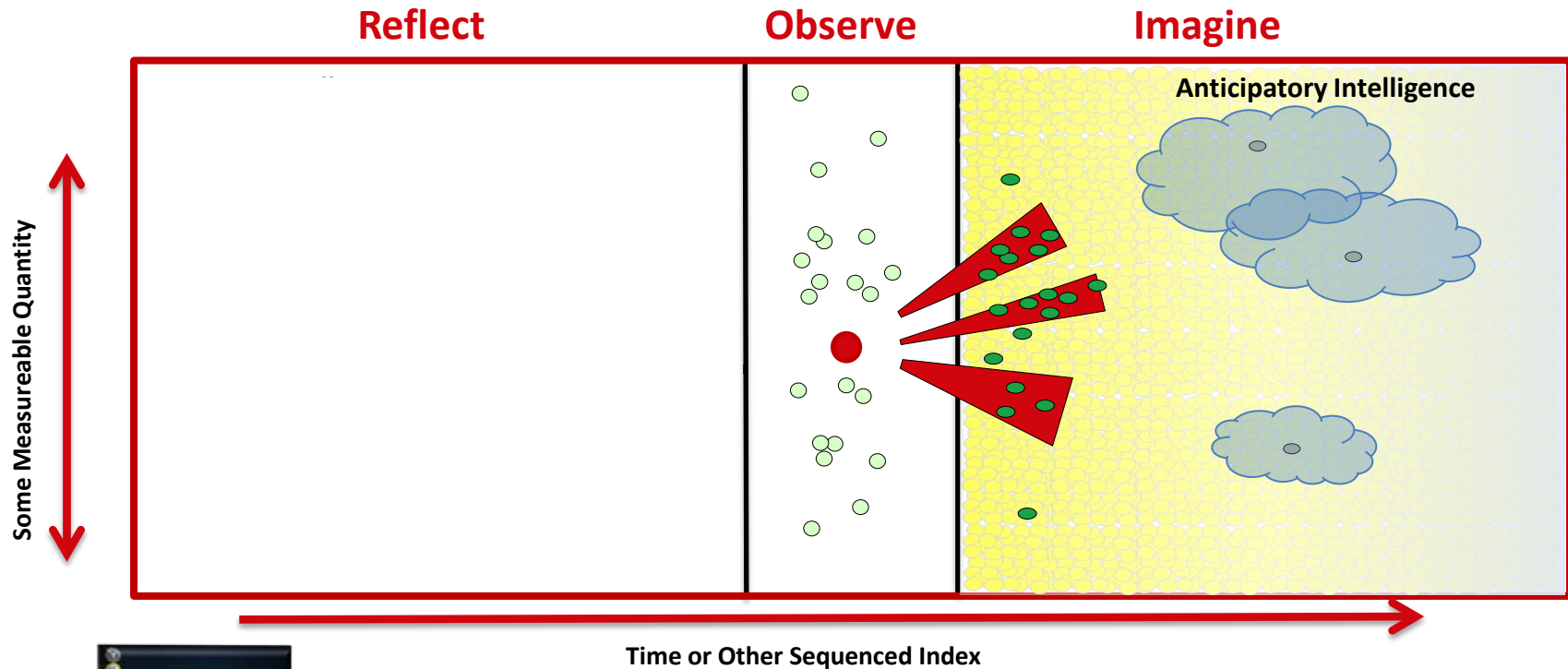


Diversity Drives Innovation

Laboratory for Analytic Sciences



A Framework for Analysis



Global Awareness

"The ability to develop, digest, and manipulate vast and disparate data streams about the world as it is today."

Strategic Foresight

"The ability to probe existing conditions and use the responses to consider alternative hypothesis and scenarios, and determine linkages and possibilities."

"Vision 2015: A Globally Networked and Integrated Intelligence Enterprise," www.dni.gov/Vision_2015.pdf, July 2008.

Cyber Strategy

➤ Mission:

- Counter/Prevent Foreign Malicious Cyber Activities & Threats to National Security

➤ Outcomes:

- Prevent Strategic Foreign Cyber Harm
- Prevent Strategic Foreign Cyber Surprise

➤ Implementation in Unclassified & Classified Domains

- Leverage Commercial Partnerships & Knowledge
- Leverage the Power of the Intelligence Community

Challenges

- Move From Reaction to Anticipation
 - Develop New Tradecraft
 - Use Non-Traditional Data Sources
 - #imagine
- *Get Ahead of the Foreign Adversary*
 - Gain knowledge of the Adversaries' Planning Cycle
- Mission Runs at Speed & Scale
 - Real-Time Nature of the Threat Requires Real-Time Analysis

It's About Questions

➤ Today... #observe #reflect

- “Who did it?”
- “How did they do it?”
- “When did you know?”

➤ Tomorrow... #imagine

- “What will it be?”
- “Who will do it?”
- “How will they do it?”
- “When will you know?”
- “When will you be confident?”

What to do...

- Put Current Observables (#Observe) into Context of Historical (#Reflect) Information, then Anticipate Future States (#Imagine)
- Utilize “novel” data sources to inform and provide Context

An Exemplar For LAS

➤ Scenario

- Hactivist Group & Company “At Odds”

➤ Question

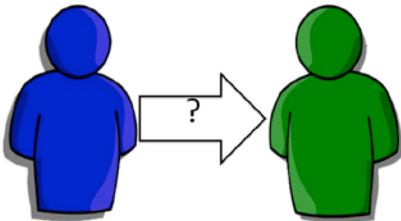
- If/When Will Company be Attacked?
 - What is Known – Doctrine, Organization, Capabilities
 - Motivation? What Could be Trigger
 - Create Cones in #Imagine Space
 - Pre-position Countermeasures

➤ Storyboard & Timeline

- Cohesive Problem Description

Structured Workplace for Structured Tradecraft

"LizardAnon" unleashed a DDOS attack against one of "Playbox's" gaming competitors



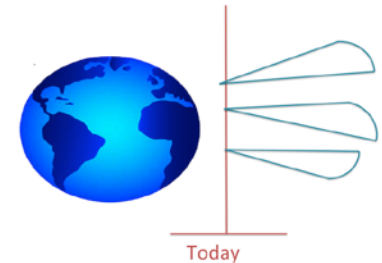
**PlayBox CIO: Asks analyst "Futurima",
What will LizardAnon do next?**

data and activities...



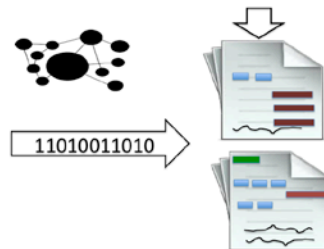
**Futurima uses her resources to
understand LizardAnon**

Imagine Future Events



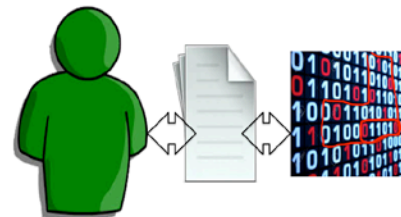
**Futurima generates hypotheses &
describes possible future attack
scenarios**

*Automated Narrative Report is
produced from Futurima's analysis*



**Futurima briefs the CIO on likelihood
of LizardAnon attack, identifies
potential attack vectors, triggers, and**

*Playbox's Cyber Defense Strategy
Anticipates LizardAnon Attack*



**PlayBox pre-deploys countermeasures
& Prevents Harm!**

QUESTIONS?